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ABSTRACT

This paper reviews research on children's friendships in nursery and elementary school settings. Studies that have implications for educational practice were selected for review. The first part of the paper is concerned with the influence of enduring personal characteristics on peer relations. Some of the stereotypes that affect children's friendships include a child's name, physical appearance, race and sex. The second section reviews research on the influence of school environment on friendships. Classroom and school situation variables covered include population mobility, opportunities to participate in school activities, the kind of classroom activities that occur, and the opportunities to succeed. The third section examines research on the kinds of social skills important in achieving peer acceptance (responsive to peers, effective communication, expertise in school activities, know-how in building a relationship). The paper concludes with a discussion of ways in which children can be taught appropriate social skills for making friends. Teaching methods which include shaping, modeling, and coaching have been found effective with socially isolated children. (Author/ED)

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Children's Friendships in School Settings

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Introduction

As children grow older their social interaction typically increases (Parten, 1932; Shure, 1963) and their friendships become more stable (Horrocks and Buker, 1957). Still, there are many children who go through the pre-school and elementary school years without friends or with few friends. One study (Gronlund, 1959) found that 6% of third to sixth graders had no classroom friends and an additional 12% had only one friend.

The consequences of low acceptance by peers has been extensively documented. Children who are socially isolated are more likely to drop out of school (Ullmann, 1957), be later identified as juvenile delinquents (Roff, Sells and Golden, 1972), and have mental health problems in later life (Cowen, Pederson, Babijian, Izzo, and Trost, 1973). The consequences of low peer acceptance may be more severe than the consequences of low achievement. In one study (Cowen, et al., 1973), extensive data were gathered on third grade children. Measures included absenteeism, grade point average, IQ scores, achievement test performance, teacher ratings, and peer ratings. Eleven years later the research team examined a community mental health register to learn which of these children were being seen by a mental health professional. On the basis of this information, researchers concluded that of all the measures taken in third grade the one that best predicted which children would later have emotional problems was peer ratings. Children who were less liked by their peers were more likely to be receiving treatment for mental health problems eleven years later.

This paper reviews research on children's friendships in nursery school and elementary school settings. Since school dominates many of the hours of a child's day, it is obviously an important setting in which to study social as well as academic events. Most of the research on children's friendships reflects this fact. While there is some research on friendships in camps, neighborhood settings, etc., the size of this literature is dwarfed in comparison to what is known about social relationships in school.

In reviewing this research, we have tried to select studies that have implications for educational practice. Most of the studies are rather well-designed and well-executed. We have not hesitated, however, to include less rigorous research if its conception or findings might stimulate further research or suggest ideas for educational practice.

The first part of the paper is concerned with the influence of enduring personal characteristics on peer relations. In this section we consider some of the stereotypes that affect children's friendships. A child's name, physical appearance, race and sex can each be influential factors in his or her peer relations. In this section we offer a few suggestions about ways to overcome these biasing factors.

Later in the paper we review research on the influence of the school environment on friendships. Children's interactions are affected by classroom and school situation variables. Population mobility, opportunities to participate in school activities, the kind of classroom activities that occur, and opportunities to succeed all may influence

the extent to which children will make friends with one another.

Many children lack friends because they do not have the necessary social skills. In the third section we examine research on the kinds of social skills that are important to achieving peer acceptance. Children who are responsive to their peers, can communicate effectively, are expert in school activities, and know how to build a relationship are more likely to make friends.

The paper concludes with a discussion of the ways in which children who lack social skills can be taught how to make friends. There is growing evidence that teaching methods which include shaping, modeling, and coaching can be quite effective in increasing the social interaction and peer acceptance of formerly isolated children. It is possible to have classrooms in which far fewer children are socially isolated!

PERSONAL CHARACTERISTICS AND FRIENDSHIP

Among the determinants of peer acceptance are personal characteristics that are rather enduring. One's name, physical appearance, race and sex are not easily changed. Yet all of these variables influence friendship selection and peer acceptance.

Names

In every generation, a few first names which were previously uncommon become popular. This is particularly true for girls' names. A recent survey of New York City hospitals (Beadle, 1973) indicated that seven of the ten most popular names given to boys in 1972 were among the ten most popular names given to children in 1948. However, none of the girls' names appeared on both lists.

But does it make a difference what names children are given? Apparently so. Names like John, Sherri and Steven are among those common appellations that would seem to minimize social discomfort. On the other hand, names like Frances, Hugo, and Hilda seem to carry with them social risks.

McDavid and Harari (1967) asked a group of ten- to twelve-year-old children in a community center to indicate their friends while another group of children, unfamiliar with children in the first group, rated the desirability of the children's names. The correlation between desirability of names and the popularity of children holding these names was significant. Children with more desirable names were better liked. In a follow-up study Harari and McDavid (1973) found that teachers, too, were affected by children's names. Teachers graded student essays

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lower when those essays were randomly paired with rare, unpopular and unattractive names.

What accounts for the relationship between names and peer acceptance? One possibility is that the simple unfamiliarity or strangeness of certain names leads people to dislike and/or avoid their bearers. Perhaps children initially behave differently toward a Herbert than a Bill and in so doing set up a cycle of less positive interaction. An alternative explanation is that parents who lack social skills are more likely to give their children odd names and fail to teach effective social skills. In this case, peers would be reacting more to the child's behavior than to the child's name.

If the unfamiliarity explanation is correct, then teachers could help an oddly-named child to be included by making the child's name more of an "everyday household word". Repeated classroom use may help. Associating the name with a famous person during history, science, music, etc., may also be effective. But if the issue isn't the child's name, per se, but the associated lack of social skills, then the child should be helped to learn social skills. Thus, for each child the teacher should assess whether the child's name is the real cause of his social difficulty.

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One last word: It is important not to overestimate the importance of names. It is only one of many variables that influence social acceptance. United States Presidents in the twentieth century have included a Theodore, Woodrow, Warren, Calvin, Herbert, Franklin, Dwight,

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Lyndon, and Gerald. The last five Vice Presidents have included an Alben, Hubert and Spiro. It may be that many Americans will vote for a man they wouldn't want as a friend; a more plausible interpretation is that names aren't everything.

Physical Attractiveness

In American society there seems to be considerable agreement about who is or is not physically attractive. In one study (Cross and Cross, 1971), seven, twelve, and seventeen-year-olds, as well as adults, were shown twelve sets of photographs. Each set contained six faces of a particular race, sex, and age group. Respondents were asked to select from each set the most beautiful face and then were asked to rate the twelve faces that had been selected. Results showed no significant difference in the evaluations of beauty made by different age groups. Even the youngest tested shared the conception of beauty held by older people.

Not only is there consensus about physical attractiveness, but there is a strong tendency for children's friendship selection to be influenced by appearance. Young and Cooper (1944) studied factors that influence popularity among elementary school children. They correlated over 30 variables with social acceptance. The most significant was attractiveness of the child's facial appearance. The better looking children were better liked. An interesting aspect of the results was that when the ratings of attractiveness were made by children the relationship was stronger than when adults did the ratings. In both

cases the raters did not know the children they rated and could not have been influenced by any previous associations with the children.

What accounts for the relationship between physical attractiveness and social acceptance? As with names, the cause of greater attraction is unclear. Perhaps better looking children are responded to more positively and thereby develop more effective social skills. Dion and Bersheid (1974) found that nursery school children attributed more negative social behavior to their less attractive peers.

Adults also tend to respond to physical appearance in judging children. Dion (1972) gave college students a photo of a second grade child along with a description of a behavioral episode. The photo showed either an attractive or less attractive child. The behavioral episode consisted of some unacceptable kind of behavior. After the subjects read the episodes, they were asked, among other questions, to predict how likely the child would be to do the same thing again. The physically attractive child was judged to be less likely to repeat the unacceptable behavior. Furthermore, on a series of six personality ratings the attractive child was judged to be more honest and pleasant than the less attractive child. These findings are striking since the behavior being judged was identical; only physical appearance varied.

One group of children who tend to be considered low in physical attractiveness are the physically disabled. In one study (Richardson, Goodman, Hastorf, and Dornbush, 1961) 10-and 11-year-old children from many different social classes, regions and ethnic backgrounds were found

to rank figures of disabled children lower in desirability. Furthermore, the same rank ordering occurred in every sample. From most to least liked they were: the normal child, a child with crutches and brace, a child in a wheelchair, a child with a left hand missing, a child with a facial disfigurement, and finally, an obese child.

Many explanations have been offered to account for people's rejection of the disabled. One view is that the disabled are victimized by an excessive societal value on beauty (Wright, 1960). Undoubtedly, this at least partially explains children's feelings toward the less attractive, in general, and the disabled, in particular. Another interpretation (Wright, 1960) is that the disabled are less liked because they are presumed to be different. Nancy Asher (1974) has found that people attribute different attitudes and personality characteristics to disabled and able-bodied individuals. In another study (Asher, 1973) she found that the extent to which college students perceived a disabled person as similar did indeed influence their feelings toward the person.

It is plausible that the same trend would be found with children since children are more attracted to those who are attitudinally similar to themselves (Byrne and Griffit, 1967). If children could discover for themselves areas of similarity with a disabled person, friendships might be possible. The emphasis should be on guided discovery. In the studies mentioned, the subject was not told that he or she was similar to the person being rated. The subject discovered

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the similarity when reading the person's attitude profile. Adults often tell children: "He is really just like you" but it is likely that this message is believed most when children discover similarities for themselves. This line of reasoning suggests that teachers should provide situations in which children can discover their similarities of attitude, personalities, values, etc.

The variable of similarity-dissimilarity can, of course, cut both ways. If, in interactions with disabled persons, able-bodied children discover more differences than similarities, increased rejection rather than acceptance could result. Rejection might occur, for example, in an environment which stressed physical prowess above all other skills or where the disabled child was over-protected, given unnecessary preferential treatment, or prevented from developing skills and interests of value to children.

Race

Racial awareness comes quite early in life. Children three years of age and older are clearly aware of racial labels and can appropriately identify their own racial membership (Clark and Clark, 1949; Durrett and Davy, 1970; Hraba and Grant, 1971).

Children also use race as criterion for selecting friends. Criswell (1939) asked New York City children in three schools to write down the names of classmates they would like to sit next to. Results indicated that children were significantly more likely to choose friends from among their own race. What is interesting, however, is that children did make a considerable number of cross-race selections. Forty per cent

of their choices would have been cross-race selections if they had been making choices without regard to race. When we averaged Criswell's results across all schools, the results indicated that approximately 25% of the selections were cross-race. Thus, although there was a tendency to prefer children of one's own race many cross-race friendships did exist.

Some recent evidence shows a similar pattern of results. Asher (1973) asked fourth and fifth grade children in a middle-sized mid-western city to write down the names of their five best friends. About 40% of the school population was black. Each month from October to April approximately fifty-five children, randomly selected, were asked to name their five best friends. The results showed that children made fewer cross-race selections than would be expected by chance. Still, approximately 18% of white children's selections and 44% of black children's selections were cross-race.

In another study Shaw (1973) asked fourth, fifth and sixth grade children in February and in June whom they most preferred to be with. Approximately 80% of the children were white and 20% black. Both blacks and whites overselected members of their own race. Nonetheless, both whites and black chose members of the other race. Overall, about 33% of black children's selections were white and 6% of white children's selections were black.

The studies reviewed thus far show less racial bias than one might expect given the history of poor race relations in the United States. One

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possibility is that children might show more racial bias if they were asked not only to name a few friends, but to describe their feelings about each classmate. A child might feel more positively about a few members of another race while feeling quite negatively about others. A recent study by Singleton (1974) is relevant to this issue. Third grade classrooms were surveyed in eleven different schools in a single moderate-sized city. These children had experienced desegregated education throughout their public school careers and school system personnel were interested in the children's race relations.

Children were asked to rate each of their classmates on two scales: how much they like to work with other children in their class and how much they like to play with other children. The scales were constructed so that "1" indicated "I don't like to" and "5" indicated "I like to a lot". The results were that both blacks and whites rated members of their own race higher than members of the other race. This result was statistically significant. As in the Criswell, Asher and Shaw studies, however, there was considerable cross-race acceptance. For example, on the play item, blacks gave blacks an average rating of 3.58 and whites an average rating of 3.17. Whites gave whites an average rating of 2.96 and blacks a rating of 2.86. Thus, children's cross-race ratings were in reality not very different from their same-race ratings.

Although the interracial picture in the pre-school and elementary school years is surprisingly positive, the pattern in high school is less hopeful. One study of high school students (Silverman and Shaw, 1973) observed social interaction at a popular meeting place in the

school. The school's population was 70% white and 30% black. Of all the interactions observed, those between white and black students averaged below 3%. It may be that the "threat" of interracial dating draws students at this age apart. If so, we need to provide children with models of positive interracial relationships so that their teenage years are not characterized by nearly complete racial separation.

What conditions promote positive or negative relations between children of different races? One thing that is clear is that contact per se is not a sufficient condition. Asher (1973) and Shaw (1973) found little systematic variation across the school year in children's acceptance of members of another race. It is clear from this that contact per se does not guarantee unbiased friendship. It is undoubtably the type of interracial experience that influences the extent to which children make friends across ethnic and racial lines.

One critical issue is the extent to which contact leads children of different races to perceive themselves as similar versus dissimilar. There is evidence that white children more positively evaluate black children when they discover them to hold similar attitudes (Insko and Robinson, 1967). To the extent that children share the same social class, values, life style, level of educational attainment etc., it is likely that more interracial acceptance will occur. One way that a classroom teacher may be able to increase cross-race friendship is by attending to similarities of interests between black and white children. In one study (Asher, 1974), fifth grade children were asked

to rate the interest value of a series of 25 pictures. The correlation between black male and white male ratings was strongly significant. The correlation between white females and black females, although lower, was also significant. So within each sex there appeared to be considerable similarity of interest between black and white children. For example, both white males and black males gave four of their five highest ratings to basketball, race cars, canoeing, and skiing. Commonly held interests may provide a basis for bringing together children of different races.

Another factor that contributes to interracial acceptance is parent attitude. Analysis of integration case reports suggests that the school atmosphere is far more positive when parents are supportive rather than opposed to the integration process. Authorities, whether Supreme Court justices, the President or parents, serve to legitimize certain points of view. There was, for example, a marked increase in pro-integration sentiment after the 1954 Supreme Court decision If children perceive their parents as supportive of integration they are probably far more likely to make an effort to reach out to children of another race.

Sex

Although racial factors influence friendship choice, the sex of the child is a more important factor. American social scientists, heavily committed to the elimination of racial bias, have sometimes underestimated the extent to which their sociometric data contains evidence of the existence of two separate cultures: boys' and girls',

The degree to which children chose same sex friends can be seen in three of the studies discussed in the previous section.

Criswell (1939) summarized her data with the comment that "cleavage between the sexes was greater than racial cleavage", and that "a given group of boys or girls nearly always preferred classmates of the same sex but different race to those of the same race but different sex" (p.18). Asher (1973) found a strong preference in children for same sex friends. Approximately 95% of children's friendship choices were same sex choices and there was little variation from month to month. Singleton (1973) also discovered strong and statistically significant acceptance of same sex and rejection of opposite sex children. On her 1-5 play scale, boys rated boys 3.95 and rated girls 2.08. Girls rated girls 3.78 and boys 2.26. Comparison of these results with those presented for race in the previous section indicate the extent to which sex is an important factor in friendship selection.

A study by Challman (1933) indicates the early age at which children exclude members of the opposite sex. He observed 33 nursery school children, recording the names of children who were in the same group. Results of over 200 hours of observation indicated predominantly same sex grouping even among children between the ages of 27 to 45 months. Only one boy and one girl showed strong preferences for opposite sex friendships. More recently, Omark and Edelman (1973) observed playground interaction and found that kindergarten, first, and second grade children interacted predominantly with members of the same sex.

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One very interesting finding is that when cross-sex friendships are formed they tend to be quite unstable. Gronlund (1955) gave two sociometric surveys four months apart. Only 20% of the cross-sex friendship choices made on the first survey were also made on the second survey. In contrast, children's same-sex choices were about three times as stable.

One concomitant of restricted interaction between boys and girls is a sharp differentiation of interests. Even young children show strong sex-typing of interests. Shure (1963), for example, found that four-year-old nursery school boys spent more time in the block area while girls spent time in the art, book and doll areas. The same study that showed a high degree of cross-race similarity of interests (Asher, 1974) found that the correlation of boys' and girls' ratings was low. Among whites none of the top five interests were shared by boys and girls. Among blacks only one of the top five interests was common to boys and girls. Finally, there is evidence that children's interests are highly related to traditional sex-role conceptions. Markell and Asher(1974) had judges rate the "masculinity" and "femininity" of 25 pictures. When these ratings were correlated with children's interest in the same pictures,the results showed that boys were more interested in "masculine" pictures and girls were more interested in "feminine" pictures.

It seems likely, then, that in the long run the occurence of many cross-sex friendships depends upon diminishing sex-role rigidity. If boys and girls were reared to have a wider range of interests and to

enjoy a wider range of activities, there would probably be many more boy-and-girl friends. An interesting question is whether educational programs such as "Free to be You and Me" or "Sesame Street" will produce change in children's sex-role concepts and friendship patterns.

In the short run, one way to bring boys and girls together may be to provide common or superordinate goals (Sherif, 1958). In a study by DeVries and Edwards (1972), seventh grade math classes were organized so that children worked individually in two classes and were rewarded for individual achievement while in two other classes boys and girls were teamed together and children were rewarded according to their team's performance. After the four-week experiment was over, children were asked a number of questions; one of these requested them to list their friends. In the two "no team" classes, the number of children's choices that crossed sex-lines was 21% and 17%. In the "team" classes, however, the number of cross-sex choices was 33% and 27%. The findings of this experiment suggest that using superordinate goals may help overcome the social distance between boys and girls.

SITUATIONAL CHARACTERISTICS AND FRIENDSHIP

One way to increase friendships among children is to structure the educational environment so that friendships are likely to develop and endure. Many children may lack friends or have few friends because the environment does not promote friendship. A variety of situational factors which influence friendship will be discussed.

Population Mobility

Although contact alone is not sufficient to create peer acceptance, children who have prolonged contact with the same peers should at least have greater opportunity to form friendships. Following this line of reasoning, researchers have investigated the effect of residential mobility of individual children and school populations in relation to peer acceptance. In a study of individual mobility (Young and Cooper, 1944), the five least and five most accepted children in each of eleven elementary school classrooms were compared on the length of time in the current school and the number of schools previously attended. The most accepted and least accepted children did not differ on either of these measures. More recently, Roistacher (1974) found that the degree of an individual child's mobility had no relationship to the number of peers in school who knew him. Neither study, then, found evidence that the more mobile child is at a social disadvantage. It should be noted, however, that neither study controlled for socioeconomic status or social skill repertoire of the children. The more mobile children may have had various skills which made them more socially effective, thereby offsetting any potential disadvantages of mobility. There is evidence, for example, that middle class children are more effective communicators than lower class children (Gottman, Gonzo,and Rasmussen, 1974; Heider, 1971)

While individual mobility may not be an important factor, mobility within an entire school population may well be important. In one study (Roistacher, 1974),four inner city and four suburban schools were compared.

The inner city schools had an annual pupil turnover rate of over 35%; in contrast, the turnover rate in the suburban schools averaged below 10%. Eighth grade boys in each school were asked to indicate those students they knew well. In schools with high turnover fewer children were known by others. Furthermore, these results were obtained even when other differences between the schools such as income, and racial composition were statistically controlled.

It would seem, then, that children who attend "high turnover" schools have a social disadvantage when it comes to making friends. In this type of environment, it is necessary for the school staff and community to take special steps to bring children in contact with one another. Other environments with high population turnover (e.g., universities, military bases) provide a variety of social activities for integrating new members and building cohesiveness. Perhaps schools could adopt some of their techniques. Having children eat or play with children from different classrooms might help, especially if the teacher made sure that children learned each other's names. It might also help if children could learn about each other's background, where they lived before, their interests, etc. In a high-mobility environment, children, like adults, need to identify characteristics in others that will help them to rapidly build relationships.

Opportunities for Participation

Situations vary in the extent to which they allow people to participate fully in social interaction. For example, if there is a large variety

of social roles to be filled and a limited number of potential "actors", more people will get involved. This is the type of situation that exists in smaller schools. Whatever the size of the school, there are a certain number of roles that must be filled (e.g., student council member, band member, club member, football player, cheerleader, etc.). Thus, students who attend small schools should have greater opportunities for participation. Indeed, Gump and Friesen (1964) and Wicker (1969) have found that students in small high schools participated in a wider range of activities and held more positions of responsibility than students in large schools.

Size of classroom also appears to be an important influence on social pariticipation. Dawe (1934) observed teacher-led discussions in kindergartens ranging in size from 14 to 46 children. As one might expect, the average number of comments contributed by each child decreased as size increased. The average child in the 14-person class spoke nearly seven times while children in classes above 30 spoke less than two times each. There is,after all,a finite amount of "air time" which must be shared among classroom members.

The higher participation characteristic of small school settings should lead students to be better known by their peers. Interestingly, Roistacher (1974) found that junior high school students in smaller schools knew more fellow students, in absolute numbers, than did students in larger schools. These data should give pause to those who urge consolidation of smaller school districts into large ones. It may be that

there are social disadvantages that offset the potential economic or academic advantages to be gained from consolidation.

If participation and responsibility are important determinants of peer acceptance, then increasing participation and responsibility should promote peer acceptance. A study by McClelland and Ratliff (1947) found this to be the case. They worked in a junior high school where a particularly large number of children seemed to have no friends. They decided to intervene in one class of 35 students. On a pretest measure, 12 students received no sociometric choices on any of four sociometric questions (With whom would you like to go a show? With whom would you like to study? Whom would you like to have as a guest in your home? With whom would you rather share a secret?)

One part of their intervention consisted of providing isolated children with special classroom roles (e.g., chairman of the hospitality committee who had responsibility for sending cards to sick classroom members). The class was also divided into small groups based on seating rows. Each group had a captain and various activities such as parties and charity drives were conducted by the groups so that individual member participation was increased. Sociometric choices made after this intervention indicated that only two children were still ignored on all four questions. These results, although based on only a single classroom, are promising. Creating new roles which give children a chance to participate may be a powerful way to overcome isolation.

The importance of participating in a visible and valued classroom role is also demonstrated in a study by Chennault (1967). Two isolated

children from 16 special education classes were grouped with the two most popular children from the same classes. Each group's task was to produce a skit for their classroom. They met for 15 minutes twice a week for five weeks, and then presented their skit to the class. Sociometric ratings taken after this activity indicated that the participating isolated children were more accepted than a control group of isolated children who had not been involved with the skit.

A follow-up study (Rucker and Vicenzo, 1972) shows that maintenance of this type of change is dependent on continued participation. Isolated children from special education classes met with the most popular members of their class for 45 minutes. The group met twice weekly for two weeks to produce a classroom carnival. The group planned events, decorated the room, awarded prizes, etc. A sociometric measure given three days after the carnival indicated that the participating isolated children were far more accepted than the control group of isolated children. However, a follow-up measure taken one month after the carnival showed that these children were no longer more accepted than the control group. Once their participation ceased, the level of peer acceptance they experienced also declined. The same pattern of initial gain followed by long-run decline has also been found by Lilly (1971). These results suggest that isolated children may be unable to maintain relationships which have been situationally nurtured.

Rewarding Social Interaction

One critical situational component is whether children are rewarded

or reinforced by the teacher or by peers for engaging in friendship-making behavior. When the environment rewards certain behavior, the likelihood is greater that the behavior will occur again. If rewards are witheld, the behavior is less likely to occur. Children, like adults, are reinforced by approval of their conduct.

The power of reinforcement was demonstrated in a study by Blau and Rafferty (1970). They paired children together to play a game in which a light went on when the children cooperated. One group of children played the game without receiving any reward from the experimenter. In other groups, each time children cooperated they received a ticket redeemable for prizes. After playing, the same children rated how much they liked each other. These ratings indicated that the children rewarded for cooperation regarded each other more highly than children who were not rewarded.

An important point is that reinforcement has to be maintained to some degree if the desired behavior is to continue. One study (Hauserman, Walen, and Behling, 1973) examined the effect of reinforcing black and white first grade children for sitting with each other in the lunchroom. The study was carried out in a school lunchroom where children usually sat in racially separate groups. The teachers introduced a game in which children drew papers out of a hat. Each paper had the name of one black and one white child and children were told to sit with their "new friend". At the end of the lunch session, children who had carried out this instruction received tickets, redeemable for candy. In the next phase of the experiment, the name drawing was discontined. Instead, children simply

were encouraged to sit with "new friends" and were reinforced if they sat with an interracial group. In the final phase, reinforcement procedures were terminated.

Results of the study indicated an increase of interracial interaction in the lunchroom during the experimental phase. More important, this effect also generalized to a free play session held in the classroom after lunch. Here, too, children engaged in more cross-race interaction. However, once reinforcement procedures were ended, children once again sat with members of their own race. These results demonstrate the power that environmental reward has on children's social interactions.

Success and Failure

Another important situational variable is the extent to which the school helps the child to succeed academically. The cognitive and social areas of development are interrelated. Children who have difficulty with cognitive tasks are also likely to have greater problems in social relationships. This is demonstrated by the finding that low achieving children tend to have fewer friends in school (Gronlund, 1959).

Why might academic progress be related to peer acceptance? One possibility is that success leads children to "feel good" and be more concerned for other children. Isen, Horn, and Rosenhan(1973) did an experiment in which they arranged for some children to succeed at a game while others failed. After playing the game, children were asked by an adult experimenter to contribute money to buy toys for poor children. When contributions were made without the experimenter watching, the children

who had succeeded at the game were more generous than those who had failed. When the contributions were made publicly, the two groups gave similar amounts.

While success leads children to feel good,school failure probably leads many children to be aggressive and unkindly disposed toward their peers. And from available evidence,the aggressive child (Hartup, Glazer and Charlesworth, 1967), particularly the inappropriately aggressive child (Lesser, 1959), is disliked and rejected.

Such results suggest that environments which provide children with opportunities for feeling successful would simultaneously be promoting positive peer relations. This means first of all that the curriculum should provide children with a chance to succeed. Second, evaluation of student progress should emphasize the child's own rate of progress (Hill, 1972). In environments where children are compared with one another ("grading on a curve"), a certain percentage of children experience failure regardless of their level of performance and rate of progress.

Activities

Observation of classrooms indicates that the type of available activities influences the kinds of social interaction which may occur. A study by Charlesworth and Hartup (1967) was concerned with activities in which children interacted positively with each other. They observed 4 nursery school classrooms and counted the frequency of four categories of positive social response: giving positive attention and approval, giving affection and personal acceptance, submission (passive acceptance, imitation, allowing another child to play) and token giving (spontaneously giving physical objects such as toys or food). Sixty-five percent of

the positive responses given by children occurred in what the authors termed dramatic play activities (housekeeping area, blocks, trucks, puppet play, etc.). In contrast, table activities (puzzles, manipulative table toys, art activities, stories, flannel board, etc.) were less likely to elicit positive social behaviors. Finally, when children were wandering about the room without engaging in any activity, they were also less likely to reinforce others.

Another relevant variable is the number of activity resources available. Since limited resources can lead to conflict and aggression, one way to minimize disturbance and keep children "on task" would be to provide lots of available resources. Indeed,evidence exists (Doke and Risely, 1972) that providing children with activity options, increasing the amount of materials, and dismissing children individually (rather than en masse) from one activity to another results in greater participation by children with the materials. Each of these techniques has the effect of increasing the ratio of available materials per child.

But is a high degree of participation with materials totally desirable? A second look suggests that the picture is more complicated. When the children worked with no activity options and were dismissed en masse, it appeared that "...children spent more time talking to each other," (Doke and Risley, 1972; p.416). Since talking can lead to social learning, some nonparticipation with materials may be valuable. Having fewer material resources may be functional in another sense; the conflict and frustration that result provides children with opportunities to

learn how to share and cooperate.

SOCIAL SKILLS AND FRIENDSHIP

Many children may lack friends not because the situation is particularly interfering or constraining but because they do not have certain basic social skills. Help for these children requires that they be taught necessary social behaviors. In this section we will consider some of the behaviors associated with being liked and having friends.

Responding Positively

One important set of behaviors involves a child's ability to interact positively with others. As children grow older, they are likely to engage in more positive social responses with one another (Charlesworth and Hartup, 1967). The extent to which children behave constructively toward peers seems to be pretty consistent within a single context. For example, Kohn (1966) observed kindergarten children throughout a school year. He found a high correlation between the percent of positive interaction shown by children in the fall semester with the percent of positive interaction in the spring.

One reason for the stability of positive interaction is that children who give a lot of positive responses also tend to receive a lot. Kohn (1966) found a high correlation between the percent of positive acts made by a child and the percent of positive acts which others made toward him or her. Charlesworth and Hartup (1967), in their study of nursery school children, found that the total number of positive responses given to others and the total number received were strongly correlated. They

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also found that the number of children to whom a child positively responded was correlated significantly with the number of children who responded positively to him.

From these data we can hypothesize that children who are chosen as friends are those who engage in a higher degree of positive interaction. Studies in which children are asked to name their friends support this hypothesis. For example, Hartup, et al. (1967) observed social interaction in a nursery school and correlated the type of interaction each child displayed with the number of acceptances and rejections received on a sociometric test. Social behavior was categorized as positive or negative. The first category included giving attention and approval, giving affection and personal acceptance, submitting to another's wishes, and giving things to another. Negative behaviors included non-compliance, interference, derogation, and attack. Peer acceptance and rejection were measured by asking children to identify three children they 'especially like" and three they "don't like very much". Results of this study indicated that in both classrooms the number of positive responses a child made toward peers was positively correlated with peer acceptance. Furthermore, children who gave the most negative responses to peers were the most rejected. It seems, then, that children who lack friends do not positively reinforce interpersonal contact.

In teaching a child to be more socially effective with peers, it is necessary to develop those behaviors that will be perceived by a child's peers as positive. These behaviors may vary across settings. Gottman, Gonso, and Rasmussen (1974) correlated social interaction patterns with

peer acceptance in third and fourth grade classrooms. One-half of the classrooms were in a middle class school and one-half were in a working class school. As in the Hartup et al. (1967) study, the frequency of positive and negative social interactions was recorded. However, the observation categories were extended to include verbal and nonverbal behavior. The results indicated that the children who were liked in the middle class school were those who engaged in positive verbal interaction. In the working class school, the most liked children were those who engaged in positive non-verbal interaction. Middle class children who engaged in positive non-verbal behavior actually tended to be more disliked. These data imply that an important skill for a child to acquire is knowledge of what behaviors are reinforcing to other children. A child must learn to "psych out" the environment to figure out what kinds of behavior will lead to acceptance or rejection.

Communicating Accurately

Another skill that appears to be important is the ability to communicate accurately with another person. In one study (Gottman et al. 1974), children played a password type communication game and also wrote down the names of their friends. Third and fourth grade children who communicated more accurately also had more friends, according to the sociometric measure. Rubin (1972) had children play a communication game in which a speaker described unusually-shaped patterns to a listener. He also collected data on children's three friendship play choices. The correlation between having friends and doing well on the patterns communication task was strongly significant in kindergarten

and second grades. The correlations were nonsignificant in fourth and sixth grades.

Why might poorer communicators be less liked? One reason, perhaps, is that it is not very reinforcing or personally validating to be with someone who cannot express his ideas clearly and who may not be an especially good listener either. Another reason is that effective collaboration, whether it be in play or at work, depends on two people having a common idea of what they are about. The child who communicates poorly may also be playing or working at cross-purposes with peers.

Whatever the reason, it is important to identify possible reasons for poor communication preformance. Some children may communicate poorly because they have less adequate vocabularies. Kingsley (1968) found that kindergarten children who did poorly on a communication task had more limited vocabulary. Second, some children may not recognize that effective communication often involves making fine distinctions. Asher and Parke (in press) found that young children can communicate as effectively as older children if fine distinctions aren't required but do poorly when fine distinctions are required. Third, some children may not be taking the listener's perspective when communicating to another person. In one study (Flavell, Botkin, Fry, Wright, and Jarvis, 1968), elementary school children taught a game to a listener who was either sighted or blind. Children gave rather useful information to the sighted person but far less useful information when the listener was blind. For example, they would say "Put this piece here."; or "Take the red one and put it next to the blue one."

This type of behavior suggests that children weren't thinking about the listener's point of view.

Research is needed on whether teaching children to be more accurate communicators increases their acceptance by other children. There is evidence that communication skills can be improved through practice or teaching (Chandler, Greenspan, and Barenboim, 1974). One study (Gottman, et al, 1974) included sociometric measures and found that isolated children who were taught to be better communicators were more accepted by their classmates. No firm conclusion can be drawn since communication skill training was only one of a number of interventions with the children. Still, the results suggest that future exploration is warrented. If an isolated child is also a poor communicator, it could help to teach communication skills.

Being Expert

One way for a child to gain peer acceptance is to be very good at something valued by other children. For example, being a competent athlete is likely to be a social asset. McGraw and Tolbert (1953) compared the sociometric status of junior high school boys with their athletic ability. They measured sociometric status by asking boys to indicate the three children they liked best in their class, grade level, and school. From these ratings, a total status score was derived for each individual. Athletic ability was measured by an index composed of performance on the 50-yard dash, the standing broad jump, and the softball distance throw. At each grade level and in each class, the correlation between athletic ability and being liked was significant.

One group of children who are relatively lacking in expertise are

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the retarded. A study by Goodman, Gottlieb, and Harrison (1974) found that elementary school children expressed less liking for a sample of educably mentally retarded children from their school than for a sample of non-retarded children. Furthermore, there was evidence that increased contact through integrated classrooms led to increased rejection of the retarded. The retarded children in integrated classrooms were more rejected as potential friends. A follow-up study by Gottlieb and Budoff (1973) also found rejection of the retarded as friends and provided additional evidence that increased contact between retarded and non-retarded may lead to increased rejection. In a school with no interior walls, retarded children were more rejected than in a school with walls and segregated classrooms. As long as people judge others by their abilities, increased contact with those who are relatively less expert may lead to less rather than more acceptance.

How might the retarded be more successfully integrated with the non-retarded? The hypothesis that expertness is a critical determinant of peer acceptance suggests that activities should be emphasized in which the retarded have a chance to perform at or near the same level as non-retarded children. There are many areas in which EMR children are nearly indistinguishable from "normal" children. For example, they are likely to be more competent on the playground than in the classroom. Gottlieb (1971) found that children in Norway express more positive attitudes about playing with than working with retarded children. It is likely that the same is true for American children.

If expertness is an important determinant of being liked, not just for the retarded, but for all children, then it should be possible to

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improve the status of an isolated child by making an existing talent more visible to the class. For example, while working in a third grade class, two of the authors had an isolated child plan a puppet show with others which was presented to the class. Follow-up data indicated that the child gained one friend. If a child lacks skills valued by the group, it should be possible to increase his acceptance by teaching him a valued skill. For example, in a classroom where children emphasize athletics, teaching an isolated child to play a better game of basketball should increase his acceptance into the group. Although we know of no formal research that has evaluated the effectiveness of either of these strategies, many teachers report positive results from their own experience. It remains for researchers to catch up with effective practice.

Building a Relationship

It is conceivable that some children are positively responsive, effective communicators and expert in certain areas but still lack friends. One possibility is that they may not know how to go about making a friend. In one study (Gottman, et al., 1974), third and fourth grade children were asked individually to pretend that the experimenter was a new child in school and that he or she wanted to make friends. Children's responses were scored according to whether they offered a greeting, asked the "new child" for information (e.g., "Where do you live?") attempted to include (e.g., "Wanna come over to my house sometime?") or gave information (e.g., "My favorite sport is basketball"). In addition to participating in this role play, children

were asked to name their best friends. Children who were chosen as a friend by six or more peers were found to be much more skillful on the "new friend" role-play than children who received five choices or less.

TEACHING SOCIAL SKILLS

If children have few friends because they lack effective social behaviors, then teaching social skills can be helpful. In this section we will review research on teaching friendship-making behavior to isolated children. Our focus is on teaching strategies that have practical value for the nursery school or elementary school classroom.

Shaping

Shaping uses positive reinforcement to change behavior gradually. The first step is to wait until the child's behavior somewhat approximates the behavior to be learned and then give the child a reinforcer. As the child's behavior further approaches the desired behavior, he or she is again reinforced. This shaping process continues until the new behavior is learned. One of the first studies to demonstrate the effects of shaping on an isolated child's behavior was done by Allen, Hart, Buell, Harris and Wolf (1964). Their subject was Ann, a four-year-old nursery school child, who, after six weeks of school, was isolated from other children and engaged in a variety of behaviors to gain the teachers' attention. The study began with a five-day baseline period in which Ann's behavior was observed but no attempts were made to change her behavior. During this baseline period, Ann was observed to interact

approximately 10 percent of the time with peers and approximately 40 percent of the time with teachers.

In the next phase of the study, the teacher reinforced Ann by giving her attention as she interacted with other children. At first, she was reinforced for standing close to another child or playing beside another child. Later, she was reinforced only for direct interaction. The researchers discovered that direct comments to Ann such as "Ann, you are making dinner for the whole family" had the effect of leading Ann away from the children into interaction with the teacher. Reinforcing statements that focused on Ann as a member of a group (e.g., "You three girls have a cozy house! Here are some more cups, Ann, for your tea party.") were quite successful; interaction with adults fell below 20 percent and interaction with children increased to about 60 percent.

Then the procedure was reversed. Ann was reinforced for being alone or interacting with teachers and ignored when she interacted with peers. Her behavior returned to the baseline level. This reversal to her previously isolated situation indicates the power of the teacher's attention. Ann's behavior was strongly influenced by what she was reinforced for doing. As a final test, the teachers once again reinforced Ann only for interacting with children. As before, her time spent interacting with children increased and her time with adults decreased.

What happens to isolate children weeks after reinforcement procedures are terminated? A study by O'Connor (1972) is relevant. Eight isolated children were reinforced for making social contact. The percent

of time they spent in social interaction dramatically increased. However, when reinforcement was terminated their behavior reverted back to the baseline level. The failure to produce generalization or longer lasting effects is somewhat surprising. One might think that isolated children would find it reinforcing to be with other children and that the experience of being included by others would adequately sustain the new behavior. Perhaps the isolated children were socially unskilled and other children found them unpleasant to be with.

One approach to the problem of generalization is to gradually decrease or fade out the reinforcement rather than abruptly terminate it. A case study (Coats, 1967, reported in Baer and Wolf, 1970) with a four-year-old child found that when the teacher gradually decreased the frequency of reinforcing the child's social behavior the behavior lasted. Perhaps the gradual decrease in reinforcement gave the isolated child more time to learn and practice social skills. In this case, over time peers would begin to reinforce the child for social interaction. They would take over, as it were, the reinforcing function.

The studies considered here have been primarily concerned with increasing a child's tendency to approach other children. How do you teach an isolated child what to do once he approaches peers? One method would be to shape appropriate behavior by reinforcing closer and closer approximations of the desired behavior. This approach might be inefficient for teaching complex social skills; one could

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wait a long time for even an approximation of the appropriate behavior to occur. The next two teaching strategies to be discussed are more direct and possibly more efficient. Modeling and coaching can provide children with rules or general strategies of social interaction. These rules can guide the child's behavior so that he is reinforcing to be with.

Modeling

One way to learn something is to watch someone do it. In every culture a tremendous amount of information is transmitted from one generation to the next. Much of this information is acquired through observation. Children watch their parents shave, hunt, get up early for work, cook, make a bed, ride a bike, read, etc. By watching they learn. There has been a growing interest in using observational methods to change the behavior of children. Just as watching an aggressive model can lead children to be more aggressive (Bandura, Ross and Ross, 1961), models may serve more positive functions. For example, children have been found to imitate models who reflect thoughtfully on a problem (Ridberg, Parke, and Hetherington, 1971), contribute to charity (Rosenhan and White, 1967), and express moral judgments characteristic of older children (Turiel, 1966).

If children learn by observing others, then an isolated child's social involvement would be increased by showing him a model of a socially effective person. O'Connor (1969) identified socially isolated children in nine nursery school classes by using a combination of teacher nominations and direct behavioral observation. Half of the isolated children saw a social interaction modeling film; the other half, the

control group, saw a film about dolphins. The modeling film, 23 minutes long, consisted of eleven episodes in which a child entered a group of other children. The situations were graduated from low threat (sharing a book or toy with two other children) to high threat (joining a group of children who were gleefully tossing play equipment around the room). The model was always well received by the children (e.g., offered a toy, talked to, smiled at, etc.). A narrator described the action as it occurred in order to call children's attention to the relevant behaviors. For example, in one sequence the narrator says "Now another child comes up clos. to watch. She wants to play, too. She waits for them to see her. Now she gets a chair and she sits down with them so they will play with her. She starts to do what they are doing so they will want to play with her..."

After seeing the film, each child returned to the classroom where postfilm observations were immediately made. Results showed that the social interaction of children in the modeling condition greatly increased. In fact, they were interacting somewhat more frequently then a sample of non-isolated children. The control group that watched the dolphin film did not change at all. These are impressive results, particularly in light of the brief nature of the "therapy."

But does it last? A second study by O'Connor (1972) is relevant. Again, isolated children were selected from nursery school classrooms. One group of children saw the modeling film. As in the previous study, the behavior of the children following the film was as interactive as that of the non-isolated children. In addition, follow-up observations were made weeks after the film. The children who saw the modeling film

continued to interact with their peers. Another study using the modeling film observed children one month after exposure to the film model and also found that social interaction continued at a high level (Evers and Schwarz, 1973).

One intriguing issue left unresolved by this research is why isolated children learn from O'Connor's film models but haven't learned from the real-life peer models who are in their classes. Nearly every class has highly popular children who are also socially quite skillful. One possible explanation is that the film narrator draws the children's attention to appropriate social details that they otherwise miss. Perhaps in the flow of events in the real world the isolated child's fails to attend to significant elements of the popular child's behavior.

This analysis suggests that making the peer's model's presence explicit could have positive results. A study of disruptive behavior by Csapo (1972) is suggestive. She paired six emotionally disturbed children with six peers who were exemplars of classroom decorum. The disturbed children sat next to their classmate model and were told to watch the model and do what he was doing so that he could learn how to get along better in class. Observations indicated that all six disruptive children improved their behavior dramatically. Follow-up data were collected for ten days after the intervention was concluded and the six children continued their socially appropriate behavior.

Coaching

The development of language is a significant advance in a child's educational potential. Once children comprehend speech, they can acquire

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new social behavior through direct verbal instruction. Teachers and peers can become coaches who verbally transmit rules of social behavior. As we are using it here, coaching has a number of components. First, the child is verbally provided with a rule or standard of behavior. In simple terms he is told what he should do. Second, the child has opportunities to rehearse or practice the behavior. Finally, there are opportunities for feedback in which the child's performance is discussed and suggestions for improvement made. The studies we will review here use at least two of these three components.

Studies of assertiveness training with college students can be used to illustrate coaching. McFall and Twentyman (1973) were interested in teaching assertive behaviors to unassertive people. As part of the training, the trainee was confronted with a series of simulated, or role-play, situations which typically pose difficulty for unassertive people (e.g., saying "no" to an illegitimate request). In each situation the trainee was given verbal instructions on how best to handle the situation. Coaching was found to be effective in improving assertive behavior in the training situation and in a real-life situation. Of particular interest was the finding that trainees who had a chance to rehearse or practice the new behavior improved more than those whose training did not include opportunities for practice.

Coaching can also be effective with young children. Using verbal reasoning techniques appears to be one of the best ways to insure that children internalize rules of social behavior. For example, studies of child-rearing methods suggest that verbal reasoning leads to more

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prosocial behavior by the child than physical punishment (e.g., Hoffman and Saltzstein, 1967). More recently, Parke (1970) has found that punishment, when it is administered, is more effective if accompanied by a verbal rationale. Parke suggested that rationales might include various kinds of information such as descriptions of consequences of behavior, examples of acceptable behavior, and explicit instructions on what to do in specific situations.

These types of rationales were provided in a study by Chittenden (1942). A critical situation for young children is one in which there arelimited play resources (e.g., two children and one toy). Chittenden chose this situation and sought to teach children to take turns with materials, divide or share the materials where possible, or play cooperatively with the materials. She selected 19 nursery school children whose play with others included a high proportion of dominating behavior and a low proportion of cooperation. Ten of these children received training in how to play cooperatively with others; the other nine children served as the control group.

Chittenden's training situation was ingenious. Each child was introduced to two dolls named "Sandy" and "Mandy". In a series of situations,the dolls confronted the problem of how to play with a single toy. Sometimes they were unsuccessful and their interaction ended in a fight. At other times they were successful and they took turns, shared, or played cooperately. Eleven training sessions were held. In the first session Sandy and Mandy were introduced; and in the next ten sessions the dolls faced a series of limited resource situations. Chittenden provides scripts for each of the sessions that could be

used to repeat her training. Briefly, the first sessions served to teach the children to discriminate unhappy outcomes such as fighting, anger, etc., from happy outcomes such as sharing, having a good time, etc. In later sessions, the dolls sometimes played successfully, thereby modeling appropriate behavior. At other times they fought and the experimenter-teacher and child discussed possible ways of resolving conflicts the dolls faced. In still later sessions the child was asked to show the dolls what they could do to play more successfully. For example, after Sandy and Mandy fought over who was to use some toy cars the experimenter-teacher asked "What would you do? Show them what to do." These situations provided tests of the child's understanding.

More than a week after training, the children were observed in a real-life play situation. The results showed that the trained children had significantly decreased in their amount of dominating behavior. They also increased in cooperative behavior but the increase was not statistically significant. The control group children showed little change in their behavior from pre- to post-test.

A more recent coaching study by Zahavi (1973) has also obtained impressive results. She selected eight nursery school children who had been the most aggressive during the six hours of observation over a two-week period. The head teacher, who was highly regarded by the children met individually with four of the eight children for approximately fifteen minutes. The meeting consisted of three phases. First, the teacher explained to each child that hitting others causes harm; second, that the other children wouldn't like the child if he hit them and that hitting doesn't solve the problem; and third, the child was asked to think of

alternative behaviors to hitting such as sharing or taking turns. At each phase, the teacher asked the child questions so that he would participate in formulating these concepts. Six hours of follow-up observation conducted during the two weeks after training indicated that three of the four children greatly decreased in amount of aggressive activity. Furthermore, the decrease in aggression was accompanied by an increase in positive behaviors. The four control group children didn't change. Next, these four children were coached by the teacher. Observations made one week later indicated that three of these four children dramatically changed their behavior. These results are quite impressive in light of the short coaching session held by the teacher. They provide testimony to the way a teacher can verbally guide the behavior of even very young children.

Neither of these studies obtained sociometric measures so there is no way of knowing in the coached condition whether children gained friends as a result of their change in behavior. Two recent coaching studies have included measures of friendship. In one, (Gottman, Gonzo, and Rasmussen, 1974), "low-friend" children from a single third grade classroom were selected. Two of the children received training and two were control subjects. The training consisted of modeling and coaching in which the child saw a video-tape of a girl entering a group of peers. The video-tape was discussed and the low-friend child role played situations in which she was a new child in class and wanted to make friends. After this role play the child was taught to be a more effective communicator. The emphasis of the training was on thinking of the listener's perspective when talking to another person.

Results of this study indicated that the two coached children were rated more highly by peers while the two control children received ratings quite similar to their earlier ones. Observation in class suggested that none of the children increased their frequency of interaction. However, the two coached children changed in the kind of children they interacted with. One girl sought out more popular children and the other interacted more with other "low-friend" children. Apparently the training affected children's selection strategies.

In another coaching and friendship study (Oden, in preparation) three low-friend children in eleven different third and fourth grade classrooms were identified based on sociometric measures. One of the three was coached. This child, on five separate sessions, played a game with a classmate. Each session the child played with a different classmate. Before playing,the child was advised on how to have the most fun. The coach suggested such things as participating fully, cooperating and showing interest in the other person. The child was asked to think of examples for each of these categories. After playing the game the coach asked the child "how it went" and the child discussed his experience in terms of issues such as participation, cooperation, and validating. One of the other three low-friend children in each classroom participated in the same number of play sessions but received no coaching. The remaining child from the classroom came out of the room, played alone, and received no coaching.

The experiment lasted for three weeks. About five days later children were once again asked to indicate how much they wanted to play with and

work with the other children in the class and to name their friends. The results were encouraging. On the "play with", rating the children who played alone didn't change; the children who were paired but didn't receive coaching actually went down slightly; most important, the coached children received significantly higher ratings. On the rating "work with" and the naming of friends, the results were generally in the same direction but not significant.

In summary, it appears from a number of studies that coaching can improve children's social skills and lead to increased peer acceptance. Given the capacity of children to learn from verbal instruction, a teacher would be wise to include coaching as part of his or her methods of aiding isolated children.

SUMMARY

In this paper we have considered some of the characteristics that are associated with having friends. It is important to keep in mind that children who lack friends may do so for different reasons. Social relationships are affected by the child's personal characteristics, situational factors that influence peer relationships, and the extent to which the child has basic social skills. By observing carefully and doing informal "experiments", it should be possible to infer the reasons for a particular child's social difficulty.

If the situation seems to be constraining peer relationships, there are a number of classroom features that could be changed. Introducing opportunities for children to participate in activities, rewarding social interaction, facilitating success experiences, and providing socially conducive activities can make a difference. Research to date

suggests that it is important to maintain changes in the situation if friendships are to continue. Attending to the situation should be a continual concern given the power that environmental features have in the social lives of children.

If children lack friends due to limited social skills, a variety of teaching methods can be used. Shaping, modeling, and coaching have been found to improve the social lives of isolated children. The results are particularly encouraging in light of the short term value of the "treatment" employed in most training research. In terms of teaching social skills there are two areas, in particular, that we need to know more about.

First, do the effects of social skill training last? To date, there have been no long term follow-up studies. Results gathered about one month after training are encouraging, but there is a need for more longitudinal information. Perhaps formerly isolated children will need the psychological equivalent of "booster shots". Perhaps not.

Second, we need to know the conditions under which changes in social behavior lead to increased peer acceptance. For example, in shaping and modeling studies, the proportion of time children spend interacting with peers has increased. Typically, however, no sociometric data is gathered, so it is impossible to say for sure whether increased friendships result. For example, it is hard to know how the other children are perceiving the new behavior. It is possible that a formerly isolated child's classmates are thinking: "What a kid! He used to be by himself all the time; now he's always hanging around." The attention of the teacher and researcher should, therefore, be directed toward <u>both</u> changes in behavior and changes in sociometric status.

Although we need to know more about how friendships develop and how they can be facilitated, we do know enough right now to improve the social relationships of children. Perhaps the best strategy would be to use multiple methods of teaching social skills. The combined effects of shaping, modeling, and coaching would probably be more effective than any single technique alone. Finally, it would probably be best to consider situational variables when teaching social skills. Children need an environment in which to practice newly developing abilities.

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